

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the claims

Claims 1-36 (cancelled).

D Claim 37 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein said first and second amounts of said compounds together comprise an anti-hepatitis virus effective amount of said compounds.


Claim 38 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein R is a branched or straight chain alkyl having ~~a chain length of C<sub>1</sub> to C<sub>20</sub>~~ seven or more carbon atoms, and W, X, Y, and Z are each hydrogen.

Claim 39 (currently amended): The pharmaceutical composition of claim 38, wherein R is a straight chain alkyl having a chain length of ~~C<sub>1</sub>~~ C<sub>7</sub> to C<sub>20</sub>.

Claim 40 (currently amended): The pharmaceutical composition of claim 39, wherein R is a straight chain alkyl having a chain length of ~~C<sub>2</sub>~~ C<sub>7</sub> to C<sub>14</sub>.

Claim 41 (currently amended): The pharmaceutical composition of claim 40, wherein R is a straight chain alkyl having a chain length of ~~C<sub>6</sub>~~ C<sub>7</sub> to C<sub>12</sub>.

Claim 42 (original): The pharmaceutical composition of claim 41, wherein R is nonyl.

 Claim 43 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein R is a branched or straight chain alkyl having ~~a chain length of C<sub>1</sub> to C<sub>20</sub>~~ seven or more carbon atoms, and W, X, Y, and Z are each alkanoyl.

Claim 44 (currently amended): The pharmaceutical composition of claim 43, wherein R is a straight chain alkyl having a chain length of ~~C<sub>1</sub>~~ C<sub>7</sub> to C<sub>20</sub>.

Claim 45 (currently amended): The pharmaceutical composition of claim 44, wherein R is a straight chain alkyl having a chain length of ~~C<sub>2</sub>~~ C<sub>7</sub> to C<sub>14</sub>.

Claim 46 (currently amended): The pharmaceutical composition of claim 45, wherein R is a straight chain alkyl having a chain length of ~~C<sub>6</sub>~~ C<sub>7</sub> to C<sub>12</sub>.

Claim 47 (original): The pharmaceutical composition of claim 46, wherein R is nonyl.


Claim 48 (original): The pharmaceutical composition of claim 43, wherein said alkanoyl has a chain length of C<sub>1</sub> to C<sub>20</sub>.

Claim 49 (original): The pharmaceutical composition of claim 43, wherein said alkanoyl has a chain length of C<sub>2</sub> to C<sub>14</sub>.

Claim 50 (original): The pharmaceutical composition of claim 43, wherein said alkanoyl has a chain length of C<sub>3</sub> to C<sub>10</sub>.

Claim 51 (original): The pharmaceutical composition of claim 43, wherein said alkanoyl is butanoyl.

Claim 52 (original): The pharmaceutical composition of claim 43, wherein R is nonyl and W, X, Y, and Z are each butanoyl.

 Claim 53 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein

R is a straight chain alkyl having a chain length of ~~C<sub>4</sub>~~ C<sub>7</sub> to C<sub>20</sub>,

W, X, Y, and Z are each hydrogen, and

said antiviral compound is a nucleoside antiviral compound.

Claim 54 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein

R is a straight chain alkyl having a chain length of ~~C<sub>4</sub>~~ C<sub>7</sub> to C<sub>20</sub>,

W, X, Y, and Z are each butanoyl, and

said antiviral compound is a nucleoside antiviral compound.

Claim 55 (currently amended): The pharmaceutical composition of claim ~~36~~ 73, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is selected from the group consisting of:

~~N-(n-hexyl)-1,5-dideoxy-1,5-imino-D-glucitol;~~

N-(n-heptyl)-1,5-dideoxy-1,5-imino-D-glucitol;

N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol;

N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol,

tetrabutyrates;

*N*-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

*N*-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

*N*-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

*N*-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(1-pentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

~~*N*-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;~~

*N*-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;

*N*-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(1-pentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

~~N-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,~~  
~~tetrabutyrates;~~

N-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;

N-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate;

N-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-  
glucitol, tetrabutryate; and

N-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutryate, and

~~said nucleoside or nucleotide antiviral compound is selected  
from the group consisting of:~~

~~(+)-cis-5-fluoro-1-[2-(hydroxy-methyl)-[1,3-oxathiolan-5-  
yl]cytosine};~~

~~(-)-2'-deoxy-3'-thiacytidine-5'-triphosphate (3TC);~~

~~(-)-cis-5-fluoro-1-[2-(hydroxy-methyl)-[1,3-oxathiolan-5-  
yl]cytosine (FTC);~~

~~(-)-2',3', dideoxy-3'-thiacytidine [(-)-SddC];~~

~~1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-  
iodocytosine (FIAC);~~

~~1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-  
iodocytosine triphosphate (FIACTP);~~

~~1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-  
methyлуarcil (FMAU);~~

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~~1-beta-D-ribofuranosyl-1,2,4-triazole-3-carboxamide;~~  
~~2',3'-dideoxy-3'-fluoro-5-methyl-dexocytidine (FddMeCyt);~~  
~~2',3'-dideoxy-3'-chloro-5-methyl-dexocytidine (ClddMeCyt);~~  
~~2',3'-dideoxy-3'-amino-5-methyl-dexocytidine (AddMeCyt);~~  
~~2',3'-dideoxy-3'-fluoro-5-methyl-cytidine (FddMeCyt);~~  
~~2',3'-dideoxy-3'-chloro-5-methyl-cytidine (ClddMeCyt);~~  
~~2',3'-dideoxy-3'-amino-5-methyl-cytidine (AddMeCyt);~~  
~~2',3'-dideoxy-3'-fluorothymidine (FddThd);~~  
~~2',3'-dideoxy-beta-L-5-fluorocytidine (beta-L-FddC);~~  
~~2',3'-dideoxy-beta-L-5-thiacytidine;~~  
~~2',3'-dideoxy-beta-L-5-cytidine (beta-L-ddC);~~  
~~2'-deoxy-3'-thia-5-fluorocytosine;~~  
~~3'-amino-5-methyl-dexocytidine (AddMeCyt);~~  
~~3'-azido-3'-deoxythymidine (AZT);~~  
~~3'-chloro-5-methyl-dexocytidine (ClddMeCyt);~~  
~~9-(2-phosphonyl-methoxyethyl)-2',6'-diaminopurine-2',3'-~~  
~~dideoxyriboside;~~  
~~9-(2-phosphonylmethoxyethyl)adenine (PMEA);~~  
~~acyclovir-triphosphate (ACVTP);~~  
~~D-carbo-cyclic-2'-deoxyguanosine (CdG);~~  
~~dideoxy-cytidine;~~  
~~dideoxy-cytosine (ddC);~~  
~~dideoxy-guanine (ddG);~~  
~~dideoxy-inosine (ddI);~~  
~~E-5-(2-bromovinyl)-2'-deoxyuridine triphosphate;~~  
~~fluoro-arabinofuranosyl-iodouracil;~~  
~~stavudine;~~  
~~2-deoxy-3'-thia-5-fluorocytidine;~~  
~~2',3'-dideoxy-guanine; and~~  
~~2',3'-dideoxy-guanosine.~~

Claim 56 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is selected from the group consisting of N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol and N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates, and said nucleoside antiviral compound is (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate (3TC).

Claim 57 (original): The pharmaceutical composition of claim 56, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol.

Claim 58 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein said first amount of said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is in the range of from about 0.1 mg to about 100 mg.

Claim 59 (original): The pharmaceutical composition of claim 58, wherein said first amount of said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is in the range of from about 1 mg to about 75 mg.

Claim 60 (original): The pharmaceutical composition of claim 59, wherein said first amount of said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is in the range of from about 5 mg to about 50 mg.

Claim 61 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein said second amount of said nucleoside or



nucleotide antiviral compound, or mixture thereof, is in the range of from about 0.1 mg to about 500 mg.

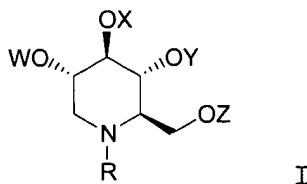
Claim 62 (original): The pharmaceutical composition of claim 61, wherein said second amount of said nucleoside or nucleotide antiviral compound, or mixture thereof, is in the range of from about 10 mg to about 300 mg.

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Claim 63 (original): The pharmaceutical composition of claim 62, wherein said second amount of said nucleoside or nucleotide antiviral compound, or mixture thereof, is in the range of from about 25 mg to about 200 mg.

Claim 64 (original): The pharmaceutical composition of claim 63, wherein said second amount of said nucleoside or nucleotide antiviral compound, or mixture thereof, is in the range of from about 50 mg to about 150 mg.

Claim 65 (currently amended): The pharmaceutical composition of claim ~~36~~ 70, wherein said second amount of said nucleoside or nucleotide antiviral compound, or mixture thereof, is in the range of from about 1 mg to about 50 mg.

Claim 66 (currently amended): A pharmaceutical composition for treating a hepatitis B virus infection in a mammal, comprising from about 0.1 mg to about 100 mg of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of Formula I:



wherein:

R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a chain length of ~~C<sub>4</sub>~~ C<sub>7</sub> to C<sub>20</sub>, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

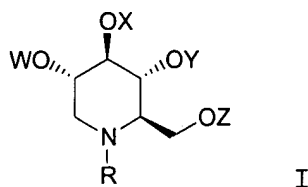
from about 0.1 mg to about 500 mg of a compound selected from the group consisting of a nucleoside antiviral compound, a nucleotide antiviral, and mixtures thereof.

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Claim 67 (original): The pharmaceutical composition of claim 66, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is selected from the group consisting of N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol and N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates, and said nucleoside antiviral agent is (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate.

Claim 68 (original): The pharmaceutical composition of claim 67, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol.

Claim 69 (original): A pharmaceutical composition for treating a hepatitis B virus infection in a human patient, comprising from about 0.1 mg to about 100 mg of N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol and from about 0.1 mg to about 500 mg of (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate.

Claim 70 (currently amended): A pharmaceutical composition, comprising a first amount of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of Formula I:



wherein:

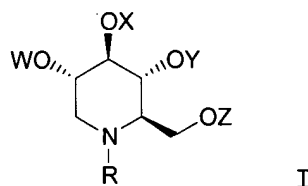
R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a ~~chain length greater than C<sub>6</sub>~~ seven or more carbon atoms, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of an antiviral compound selected from the group consisting of a nucleoside antiviral compound, a nucleotide antiviral compound, and mixtures thereof, and

a pharmaceutically acceptable carrier, diluent, or excipient.

Claim 71 (currently amended): A pharmaceutical composition, comprising a first amount of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of Formula I:



wherein:

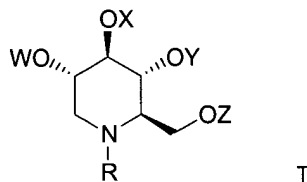
R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a chain length of between ~~C<sub>6</sub> and C<sub>12</sub>~~ C<sub>7</sub> and C<sub>20</sub>, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of an antiviral compound selected from the group consisting of a nucleoside antiviral compound, a nucleotide antiviral compound, and mixtures thereof, and

a pharmaceutically acceptable carrier, diluent, or excipient.

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Claim 72 (previously presented): A pharmaceutical composition, comprising a first amount of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of Formula I:



wherein:

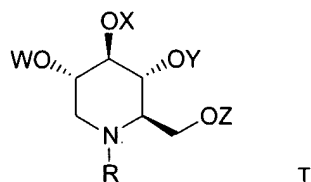
R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a chain length greater than C<sub>6</sub>, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate; and

a pharmaceutically acceptable carrier, diluent, or excipient.

Claim 73 (previously presented): A pharmaceutical composition, comprising a first amount of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of Formula I:



wherein:

R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a chain length greater than C<sub>6</sub>, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of an antiviral compound selected from the group consisting of

(+)-cis-5-fluoro-1-[2-(hydroxy-methyl)-[1,3-oxathiolan-5-yl]cytosine,

(-)-2'-deoxy-3'-thiocytidine-5'-triphosphate (3TC),

(-)-cis-5-fluoro-1-[2-(hydroxy-methyl)-[1,3-oxathiolan-5-yl]cytosine (FTC),

(-)-2',3', dideoxy-3'-thiacytidine [(-)-SddC],

1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-iodocytosine (FIAC),

1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-iodocytosine triphosphate (FIACTP)

1-(2'-deoxy-2'-fluoro-beta-D-arabinofuranosyl)-5-**methylluracil** ~~**methylluracil**~~ (FMAU);

1-beta-D-ribofuranosyl-1,2,4-triazole-3-carboxamide,

2',3'-dideoxy-3'-fluoro-5-methyl-dexocytidine (FddMeCyt),

2',3'-dideoxy-3'-chloro-5-methyl-dexocytidine (ClddMeCyt),

2',3'-dideoxy-3'-amino-5-methyl-dexocytidine (AddMeCyt),

2',3'-dideoxy-3'-fluoro-5-methyl-cytidine (FddMeCyt),

2',3'-dideoxy-3'-chloro-5-methyl-cytidine (ClddMeCyt),

2',3'-dideoxy-3'-amino-5-methyl-cytidine (AddMeCyt),

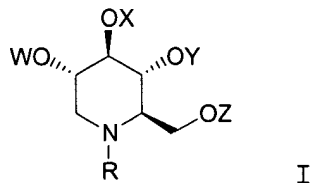
2',3'-dideoxy-3'-fluorothymidine (FddThd),

2',3'-dideoxy-beta-L-5-fluorocytidine (beta-L-FddC),

2',3'-dideoxy-beta-L-5-thiacytidine,

2',3'-dideoxy-beta-L-5-cytidine (beta-L-ddC),  
2'-deoxy-3'-thia-5-fluorocytosine,  
3'-amino-5-methyl-dexocytidine (AddMeCyt),  
3'-chloro-5-methyl-dexocytidine (ClddMeCyt),  
9-(2-phosphonyl-methoxyethyl)-2',6'-diaminopurine-2',3'-  
dideoxyriboside,  
9-(2-phosphonylmethoxyethyl)adenine (PMEA),  
acyclovir triphosphate (ACVTP),  
D-carbocyclic-2'-deoxyguanosine (CdG),  
dideoxy-cytidine,  
dideoxy-cytosine (ddC),  
dideoxy-guanine (ddG),  
dideoxy-inosine (ddI),  
E-5-(2-bromovinyl)-2'-deoxyuridine triphosphate,  
fluoro-arabinofuranosyl-iodouracil,  
stavudine,  
2-deoxy-3'-thia-5-fluorocytidine,  
2',3'-dideoxy-guanine, and  
2',3'-dideoxy-guanosine; and  
a pharmaceutically acceptable carrier, diluent, or  
excipient.

Claim 74 (previously presented): A pharmaceutical composition for  
the treatment of hepatitis infection, comprising a first amount  
of an N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound of  
Formula I:



wherein:

R is selected from the group consisting of arylalkyl, cycloalkylalkyl, and branched or straight chain alkyl having a chain length of C<sub>1</sub> to C<sub>20</sub>, and

W, X, Y, and Z are each independently selected from the group consisting of hydrogen, alkanoyl, aroyl, and trifluoroalkanoyl; and

a second amount of (-)-2'-deoxy-3'-thiocytidine-5'-triphosphate; and

a pharmaceutically acceptable carrier, diluent, or excipient.

Claim 75 (currently amended): The pharmaceutical composition of claim 74, wherein said N-substituted-1,5-dideoxy-1,5-imino-D-glucitol compound is selected from the group consisting of:

- N-(n-hexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-heptyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-octyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates;
- N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates;
- N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates;
- N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol, tetrabutyrates;
- N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;
- N-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;

N-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(1-pentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
~~N-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;~~  
N-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
glucitol;  
N-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol;  
N-(n-nonyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(n-decyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(n-undecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(n-dodecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(2-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(4-ethylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;  
N-(5-methylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates;



N-(3-propylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(1-pentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

~~N-(1-pentylpentylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,~~  
~~tetrabutrate;~~

N-(1-butylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(7-methyloctyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(8-methylnonyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(9-methyldecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(10-methylundecyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(6-cyclohexylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(4-cyclohexylbutyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(2-cyclohexylethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(1-cyclohexylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(1-phenylmethyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(3-phenylpropyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutrate;

N-(3-(4-methyl)-phenylpropyl)-1,5-dideoxy-1,5-imino-D-  
glucitol, tetrabutrate; and

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N-(6-phenylhexyl)-1,5-dideoxy-1,5-imino-D-glucitol,  
tetrabutyrates.

A handwritten signature in black ink, appearing to be 'B. Emt', is located on the left side of the page.